

Work Order ID 89697

\*89697\*

Page 1

Thursday, August 30, 2012 3:29:50 PM

Item ID: 647.0115

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Clip

Start Date: 8/30/2012 Start Qty: 20.00

\*20\*

Cust Item ID:

Required Date: 9/28/2012 Req'd Qty: 20.00

\*20\*

Customer:

Reference:

Approvals: Process Plan:

Date: 12-09-12 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run

Start

\*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

\*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|----------|--------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 647.0100 | A            | 0.00                 |         |        |              |               |               |                  |                |

110

\*110\*

Waterjet

FLOW CNC Waterjet

2024.063

Memo

1-Cut as per Dwg

Dwg Rev: A

Prog Rev: A

2-Deburr if necessary

SCRAP

120

QC2- Inspect parts off machine FAI/FAIB

0.00

\*120\*

QC

Quality Control

Memo

0.00

20 0 JM 12-9-16

20 0 JM 12-9-16

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____  |      |      | DISPOSITION                                |  | AGAINST DEPARTMENT/PROCESS         |  |                                      |  |              |              |   |
|--|------|------|--|--|------------------------------------|--|--------------------------------------|--|--------------|--------------|---|
|  |      |      | Rework <input type="checkbox"/>            | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |  |              |              |   |
|  |      |      | Scrap <input type="checkbox"/>             | Machining <input type="checkbox"/>   | Small Fab <input type="checkbox"/> | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |  |              |              |   |
|  |      |      | Use-as-is <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>   | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |  |              |              |   |
|  |      |      | Work Order Update <input type="checkbox"/> | Large Fab <input type="checkbox"/>   | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                      |  |              |              |   |
| Root Cause   | Date | Step | Qty  | Description of work order update or Non-conformance  |                                    | Initial Chief Eng                            | Action Description                   | Sign & Date  | Verification | QC Inspector |   |
| Doc/Data   |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Equip/Tooling  |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Operator   |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Material   |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Setup  |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Other  |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Process  |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Supplier   |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Training   |      |      |  |  |                                    |  |                                      |  |              |              |   |
| Unapproved   |      |      |  |  |                                    |  |                                      |  |              |              |   |
| FAULT CATEGORY   |      |      |  |  |                                    |  |                                      |  |              |              |   |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |                                    |  |                                      | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Other |              |              | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |

**Work Order ID 89697**

Thursday, August 30, 2012 3:29:50 PM

**\*89697\***

Page 2

Item ID: 647.0115

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

Revision ID:

Item Name: Clip

Stop

**\*NS2\***

Start Date: 8/30/2012

Start Qty: 20.00

**\*20\***

Cust Item ID:

Required Date: 9/28/2012

Req'd Qty: 20.00

**\*20\***

Customer:

Reference:

|            |               |       |            |       |      |       |              |
|------------|---------------|-------|------------|-------|------|-------|--------------|
| Approvals: | Process Plan: | Date: | Tooling:   | Date: | Run  | Start | <b>*NR1*</b> |
|            | QC:           | Date: | SPC (Y/N): | Date: | Stop |       | <b>*NR2*</b> |

| Sequence ID/<br>Work Center ID              | Operation<br>Description   | Set Up/<br>Run Hours   | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|---|--|------------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130<br><b>*130*</b><br>QC                   | QC8- Inspect parts - second check<br>Quality Control             | 0.00<br>Smp<br>12-9-24 |         |        |              | 20            |               |                  |                |
| 140<br><b>*140*</b><br>Brake NC<br>Brake NC | Form as per dwg<br>Memo  | 0.00                   |         |        |              |               |               |                  | Pto S          |
| 150<br><b>*150*</b><br>QC                   | QC5- Inspect part completeness to step on W/O<br>Quality Control | 0.00                   |         |        |              |               |               |                  |                |

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DOA/WT

Date:

13/07/10

QA Closed:

✓

Date:

13/

| Work Order: <u>49697</u>  | DISPOSITION                                | AGAINST DEPARTMENT/PROCESS                    |   |  |                                      |  |
|---------------------------|--|---|---|--|--------------------------------------|--|
| Part No. <u>1047.0115</u> | Rework <input type="checkbox"/>            | Skid-tube <input type="checkbox"/>            | Crosstube <input type="checkbox"/>            | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |  |
| NCR No. <u>13-2190</u>    | Scrap <input checked="" type="checkbox"/>  | Machining <input checked="" type="checkbox"/> | Small Fab <input checked="" type="checkbox"/> | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |  |
|                           | Use-as-is <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>        | Finishing <input type="checkbox"/>            | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |  |
|                           | Work Order Update <input type="checkbox"/> | Large Fab <input type="checkbox"/>            | Composite <input type="checkbox"/>            | Supplier <input type="checkbox"/>            |                                      |  |

| Root Cause    | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling | X    |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Setup         |      |      |     |   |                   |                    |             |              |              |
| Other         |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |
|               |      |      |     |   |                   |                    |             |              |              |

## FAULT CATEGORY

| Landing Gear                 | General        |                                 |                      |                    |  |
|------------------------------|----------------|---------------------------------|----------------------|--------------------|--|
| Bending                      | Bend           | Grain                           | Ovalized             | Pressure/Forced    |  |
| Centre Not Concentric to O/S | BOM/Route      | Hardware                        | Over/Under tolerance | Temperature/Cure   |  |
| Cracks                       | Broken/Damaged | Inspection Incomplete           | Part Incorrect       | Weld               |  |
| Crushed/Crimped              | Burrs          | Instructions Incomplete/Unclear | Part Lost/Missing    | Wrong Stock Pulled |  |
| Cuffs                        | Contamination  | Maintenance                     | Part Moved           |                    |  |
| Heat Treat                   | Countersink    | Mislabeled                      | Positioned Wrong     |                    |  |
| Inspection Strip in Tube     | Cut Too Short  | Misread                         | Power Loss/Surge     |                    |  |
| Ripples in Bend              | Drill Holes    | Offset                          | Other                |                    |  |
| Torque Waves in Extrusion    | Drawing        | Out of Calibration              |                      |                    |  |
| Turning Sequence             | Finish         | Out of Sequence                 |                      |                    |  |
| Wave/Twist in Tube           | Folio          | Outside Dimensions              |                      |                    |  |



NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____  |   |      | DISPOSITION   |  |  | AGAINST DEPARTMENT/PROCESS   |  |             |              |   |  |
|--|---|------|---|--|--|--|--|-------------|--------------|---|--|
|  |   |      | Rework<br><input type="checkbox"/><br>Scrap<br><input type="checkbox"/><br>Use-as-is<br><input type="checkbox"/><br>Work Order Update<br><input type="checkbox"/>   | Skid-tube<br><input type="checkbox"/><br>Machining<br><input type="checkbox"/><br>Thermoforming<br><input type="checkbox"/><br>Large Fab<br><input type="checkbox"/> | Crosstube<br><input type="checkbox"/><br>Small Fab<br><input type="checkbox"/><br>Finishing<br><input type="checkbox"/><br>Composite<br><input type="checkbox"/> | Water Jet<br><input type="checkbox"/><br>Prod. Eng. Coor.<br><input type="checkbox"/><br>Rec/Store/Packaging<br><input type="checkbox"/><br>Supplier<br><input type="checkbox"/> | Engineering<br><input type="checkbox"/><br>Quality<br><input type="checkbox"/><br>Other<br><input type="checkbox"/>  |             |              |   |  |
| Part No. _____   |   |      |   |  |  |  |  |             |              |   |  |
| NCR No. _____  |   |      |   |  |  |  |  |             |              |   |  |
| Root Cause   |   | Date | Step  | Qty  | Description of work order update or Non-conformance  | Initial Chief Eng  | Action Description   | Sign & Date | Verification | QC Inspector  |  |
| Doc/Data   |   |      |   |  |  |  |  |             |              |   |  |
| Equip/Tooling  |   |      |   |  |  |  |  |             |              |   |  |
| Operator   |   |      |   |  |  |  |  |             |              |   |  |
| Material   |   |      |   |  |  |  |  |             |              |   |  |
| Setup  |   |      |   |  |  |  |  |             |              |   |  |
| Other  |   |      |   |  |  |  |  |             |              |   |  |
| Process  |   |      |   |  |  |  |  |             |              |   |  |
| Supplier   |   |      |   |  |  |  |  |             |              |   |  |
| Training   |   |      |   |  |  |  |  |             |              |   |  |
| Unapproved   |   |      |   |  |  |  |  |             |              |   |  |
| FAULT CATEGORY   |   |      |   |  |  |  |  |             |              |   |  |
| Landing Gear   |   |      | General   |  |  |  |  |             |              |   |  |
| <input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |      | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |  |  | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |             |              | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |  |
|  | <input type="checkbox"/> Other  |      |   |  |  |  |  |             |              |   |  |

Work Order ID 89697

Thursday, August 30, 2012 3:29:50 PM

\*89697\*

Page 4

Item ID: 647.0115

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Clip

Stop

\*NS2\*

Start Date: 8/30/2012 Start Qty: 20.00

\*20\*

Cust Item ID:

Required Date: 9/28/2012 Req'd Qty: 20.00

\*20\*

Customer:

Reference:

|            |               |       |            |       |      |       |       |
|------------|---------------|-------|------------|-------|------|-------|-------|
| Approvals: | Process Plan: | Date: | Tooling:   | Date: | Run  | Start | *NR1* |
|            | QC:           | Date: | SPC (Y/N): | Date: | Stop |       | *NR2* |

| Sequence ID/<br>Work Center ID    | Operation<br>Description                                      | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|-----------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 190<br><b>*190*</b><br>SprayPaint | <b>Memo</b>   | 0.00                 |         |        |              |               |               |                  |                |
| Spray Painting                    | PRIME IAW MIL-P-23377J TYPE1 CLASS N AS PER DWG. (SEE NOTE 2) |                      |         |        |              |               |               |                  |                |
|                                   | BATCH:_____   |                      |         |        |              |               |               |                  |                |
| 200<br><b>*200*</b><br>QC         | QC14- Inspect Spray Paint                                     | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                   | <b>Memo</b>   | 0.00                 |         |        |              |               |               |                  |                |
| 210<br><b>*210*</b><br>Packaging  | Identify as per dwg & Stock Location:_____                    | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                         | <b>Memo</b>   | 0.00                 |         |        |              |               |               |                  |                |

NCR: Yes / No

DQA: Date:

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |  |      |      |   |  |   |  |  |             |   |              |
|--|--|------|------|---|--|---|--|--|-------------|---|--------------|
| Work Order: _____<br>Part No. _____<br>NCR No. _____   |  |      |      | DISPOSITION   |  | AGAINST DEPARTMENT/PROCESS  |  |  |             |   |              |
|  |  |      |      | Rework<br>Scrap<br>Use-as-is<br>Work Order Update   | Skid-tube<br>Machining<br>Thermoforming<br>Large Fab | Crosstube<br>Small Fab<br>Finishing<br>Composite  | Water Jet<br>Prod. Eng. Coor.<br>Rec/Store/Packaging<br>Supplier | Engineering<br>Quality<br>Other  |             |   |              |
| Root Cause   |  | Date | Step | Qty   | Description of work order update or Non-conformance  |   | Initial Chief Eng  | Action Description   | Sign & Date | Verification  | QC Inspector |
| Doc/Data   |  |      |      |   |  |   |  |  |             |   |              |
| Equip/Tooling  |  |      |      |   |  |   |  |  |             |   |              |
| Operator   |  |      |      |   |  |   |  |  |             |   |              |
| Material   |  |      |      |   |  |   |  |  |             |   |              |
| Setup  |  |      |      |   |  |   |  |  |             |   |              |
| Other  |  |      |      |   |  |   |  |  |             |   |              |
| Process  |  |      |      |   |  |   |  |  |             |   |              |
| Supplier   |  |      |      |   |  |   |  |  |             |   |              |
| Training   |  |      |      |   |  |   |  |  |             |   |              |
| Unapproved   |  |      |      |   |  |   |  |  |             |   |              |
| <b>FAULT CATEGORY</b>  |  |      |      |   |  |   |  |  |             |   |              |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |  |      |      | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |  | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |             | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |              |

Work Order ID 89697

Thursday, August 30, 2012 3:29:50 PM

\*89697\*

Page 5

Item ID: 647.0115

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Clip

Stop

\*NS2\*

Start Date: 8/30/2012 Start Qty: 20.00 \*20\*

Cust Item ID:

Required Date: 9/28/2012 Req'd Qty: 20.00 \*20\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

220

QC21- Final Inspection - Work Order Release

0.00

\*220\*

QC

Memo

0.00

Quality Control

10/13-06-20

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____  |      |      | DISPOSITION                                |   | AGAINST DEPARTMENT/PROCESS         |  |                                      |   |             |              |              |  |  |   |  |
|--|------|------|--|---|------------------------------------|--|--------------------------------------|---|-------------|--------------|--------------|--|--|---|--|
|  |      |      | Rework <input type="checkbox"/>            | Skid-tube <input type="checkbox"/>  | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |   |             |              |              |  |  |   |  |
|  |      |      | Scrap <input type="checkbox"/>             | Machining <input type="checkbox"/>  | Small Fab <input type="checkbox"/> | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |   |             |              |              |  |  |   |  |
|  |      |      | Use-as-is <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>  | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |   |             |              |              |  |  |   |  |
|  |      |      | Work Order Update <input type="checkbox"/> | Large Fab <input type="checkbox"/>  | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                      |   |             |              |              |  |  |   |  |
| Root Cause   | Date | Step | Qty  | Description of work order update or Non-conformance   |                                    | Initial Chief Eng                            | Action Description                   |   | Sign & Date | Verification | QC Inspector |  |  |   |  |
| Doc/Data   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Equip/Tooling  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Operator   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Material   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Setup  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Other  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Process  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Supplier   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Training   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Unapproved   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| FAULT CATEGORY   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |                                    |  |                                      | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |             |              |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |  |
|  |      |      |  |   |                                    |  |                                      |   |             |              |              | <input type="checkbox"/> Other   |  |   |  |
|  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
|  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |

# Picklist Print

Page 1

Thursday, August 30, 2012 3:29:55 PM

Work Order ID: 89697

\*89697\*

Parent Item: 647.0115

\*647 0115\*

Parent Item Name: Clip

Start Date: 8/30/2012

Required Date: 9/28/2012

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A 12.08.14 NEW ISSUE DD VERF:JFS

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty  | Qty<br>Issued | Date<br>Issued | Status     |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|---------------|---------------|----------------|------------|
| M2024T3S.063                    |                        | Purchased     | No          |                     |                  | 110             | sf                 | 136.5200       | 0.0556      | 1170526<br>** | 112           |                | Jm 12-9-16 |

\*M2024T3S 063\*

2024-T3 .063 sheet

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| MAT022   | 136.52  |          |
| 119916   | 67.1    |          |
| 121197   | 69.42   | 121197   |

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____  |      |      | DISPOSITION                                |   | AGAINST DEPARTMENT/PROCESS         |  |                                      |   |             |              |              |  |  |   |  |
|--|------|------|--|---|------------------------------------|--|--------------------------------------|---|-------------|--------------|--------------|--|--|---|--|
|  |      |      | Rework <input type="checkbox"/>            | Skid-tube <input type="checkbox"/>  | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |   |             |              |              |  |  |   |  |
|  |      |      | Scrap <input type="checkbox"/>             | Machining <input type="checkbox"/>  | Small Fab <input type="checkbox"/> | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |   |             |              |              |  |  |   |  |
|  |      |      | Use-as-is <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>  | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |   |             |              |              |  |  |   |  |
|  |      |      | Work Order Update <input type="checkbox"/> | Large Fab <input type="checkbox"/>  | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                      |   |             |              |              |  |  |   |  |
| Root Cause   | Date | Step | Qty  | Description of work order update or Non-conformance   |                                    | Initial Chief Eng                            | Action Description                   |   | Sign & Date | Verification | QC Inspector |  |  |   |  |
| Doc/Data   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Equip/Tooling  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Operator   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Material   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Setup  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Other  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Process  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Supplier   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Training   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Unapproved   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| FAULT CATEGORY   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |                                    |  |                                      | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |             |              |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |  |
|  |      |      |  |   |                                    |  |                                      |   |             |              |              | <input type="checkbox"/> Other   |  |   |  |
|  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
|  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |

|                                 |              |             |
|---------------------------------|--------------|-------------|
| DART AEROSPACE LTD              | Work Order:  | 89697       |
| Description: Clip               | Part Number: | 647.0115    |
| Inspection Dwg: 647-0110 Rev: A |              | Page 1 of 1 |

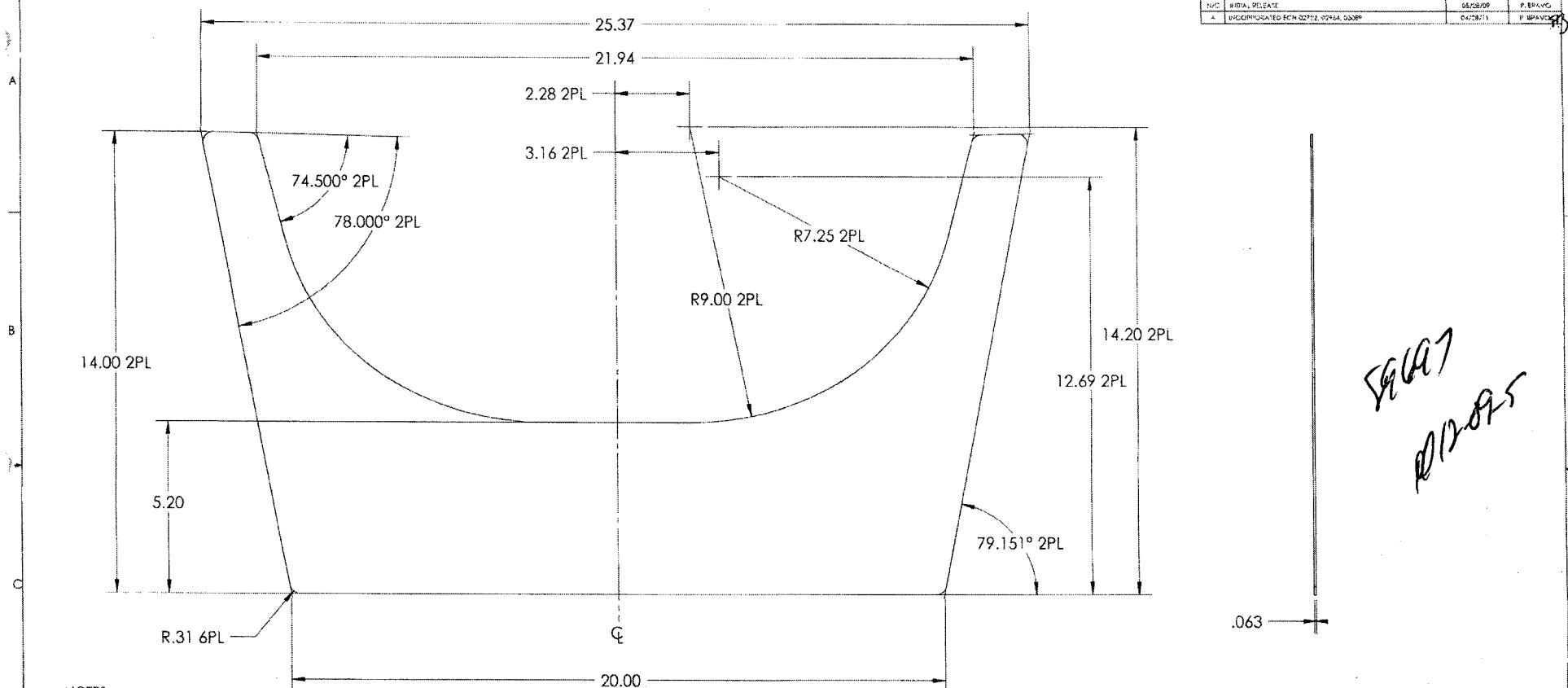
## **FIRST ARTICLE INSPECTION CHECKLIST**

|                        |                        |                       |
|------------------------|------------------------|-----------------------|
| Measured by: <u>JM</u> | Audited by: <u>SMB</u> | Preliminary Approval: |
| Date: <u>12-9-16</u>   | Date: <u>12-9-24</u>   | Date:                 |

| Rev | Date     | Change                     | Revised by | Approved |
|-----|----------|----------------------------|------------|----------|
| E   | 10.04.14 | Added preliminary approval | KJ         |          |

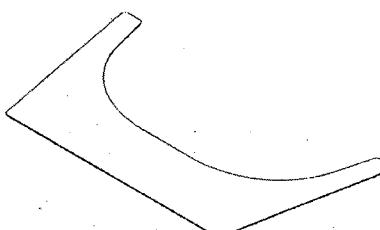
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| REVISIONS |                                      |          |          |
|-----------|--------------------------------------|----------|----------|
| REV       | DESCRIPTION                          | DATE     | APPROVED |
|           | LAST PROTOTYPE REVISION: P01         |          | N/C      |
| N/C       | INITIAL RELEASE                      | 05/28/09 | P. BRAVO |
| A         | INCORPORATED ECN 02702, 02704, 02808 | 04/28/11 | P. BRAVO |



## NOTES

- 1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; PRETREAT PR-148 ADHESION PROMOTER; PRIME IAW MIL-P-23377J TYPE I CLASS N.
- 3. DEBURR AND BREAK ALL SHARP EDGES.
- 4. IDENTIFY IAW MPP-120.
- 5 MATERIAL: 304 SS IAW AMS 5643.
- 6 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N.



647.0110

| QTY | NEXT ASSY (\$) | DRAWN BY<br>P. BRAVO | CHECKED BY<br>P. BRAVO | APPROVAL<br>P. BRAVO<br>DEC 1992<br>CONTRACT NO. | CORNERS DATE<br>NOV-24-91 05-28-97 | PARTS LIST    | APICAL INDUSTRIES |        |             |
|-----|----------------|----------------------|------------------------|--|------------------------------------|---------------|-------------------|--------|-------------|
|     |                |                      |                        |  |                                    |               | FIND #            | PART # | DESCRIPTION |
|     | 646.9500       |                      |                        |  | 647.0116                           | DOUBLER       | △                 | △      |             |
|     |                |                      |                        |  | 647.0115                           | CLIP          | △                 | △      |             |
|     |                |                      |                        |  | 647.0114                           | CLIP          | △                 | △      |             |
|     |                |                      |                        |  | 647.0113                           | STRUT DOUBLER | △                 | △      |             |
|     |                |                      |                        |  | 647.0112                           | STRUT BRACKET | △                 | △      |             |
|     |                |                      |                        |  | 647.0111                           | PANEL         | △                 | △      |             |
|     |                |                      |                        |  | 647.0110                           | ROOF DOUBLER  | △                 | △      |             |

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

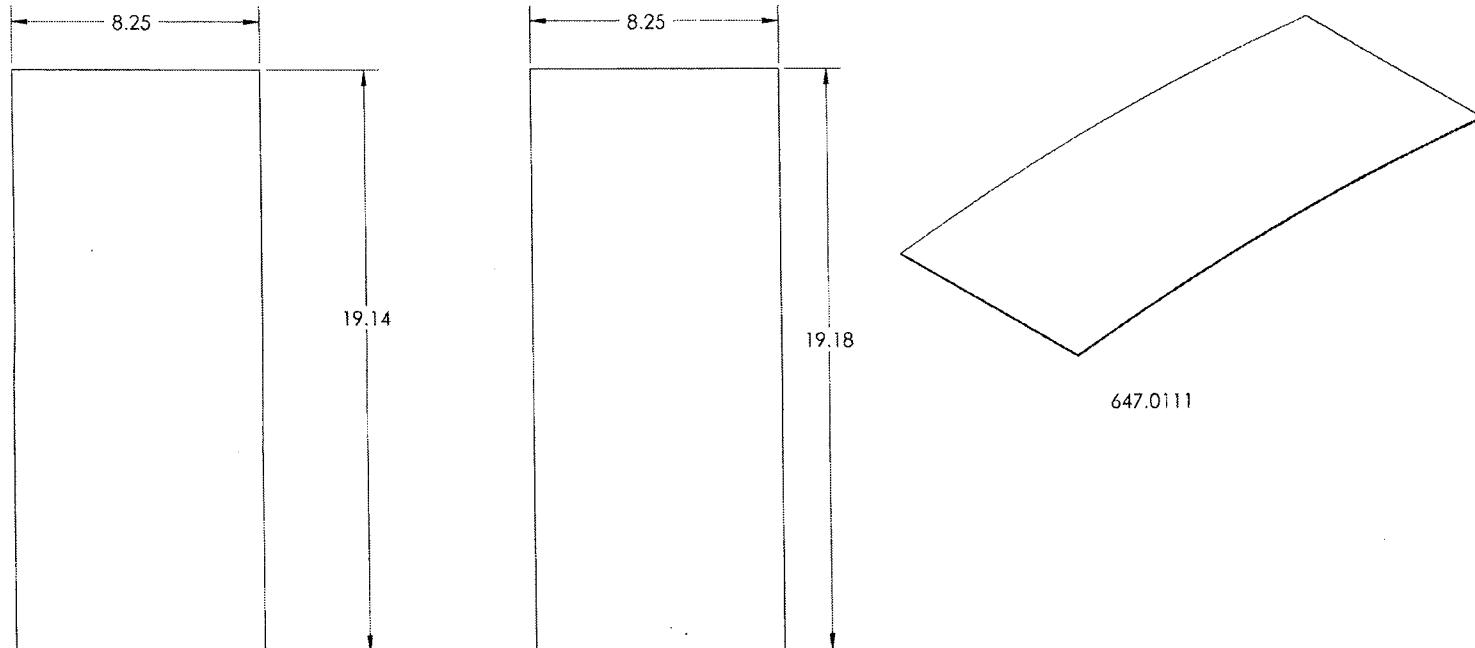
## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

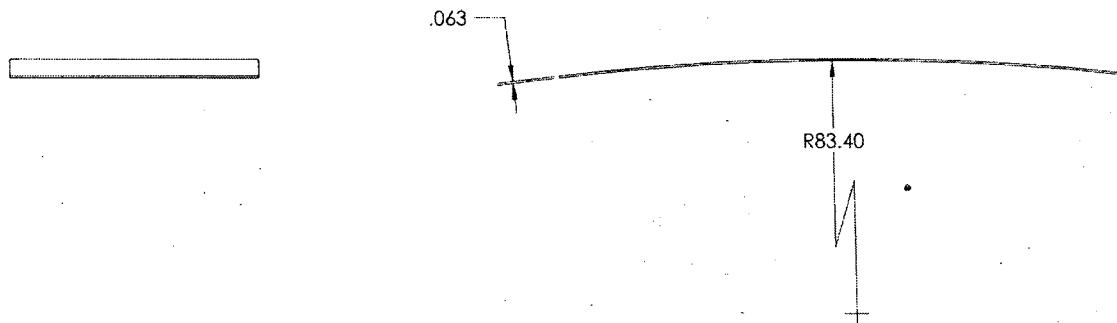
| Work Order: _____   |      |      | DISPOSITION                                |   |                                    | AGAINST DEPARTMENT/PROCESS                   |                                      |   |             |              |              |  |  |   |  |
|---|------|------|--|---|------------------------------------|--|--------------------------------------|---|-------------|--------------|--------------|--|--|---|--|
|   |      |      | Rework <input type="checkbox"/>            | Skid-tube <input type="checkbox"/>  | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |   |             |              |              |  |  |   |  |
|   |      |      | Scrap <input type="checkbox"/>             | Machining <input type="checkbox"/>  | Small Fab <input type="checkbox"/> | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |   |             |              |              |  |  |   |  |
|   |      |      | Use-as-is <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>  | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |   |             |              |              |  |  |   |  |
|   |      |      | Work Order Update <input type="checkbox"/> | Large Fab <input type="checkbox"/>  | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                      |   |             |              |              |  |  |   |  |
| Root Cause  | Date | Step | Qty  | Description of work order update or Non-conformance   |                                    | Initial Chief Eng                            | Action Description                   |   | Sign & Date | Verification | QC Inspector |  |  |   |  |
| Doc/Data  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Equip/Tooling   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Operator  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Material  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Setup   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Other   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Process   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Supplier  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Training  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| Unapproved  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| FAULT CATEGORY  |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |                                    |  |                                      | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |             |              |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |  |
|   |      |      |  |   |                                    |  |                                      |   |             |              |              | <input type="checkbox"/> Other   |  |   |  |
|   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |
|   |      |      |  |   |                                    |  |                                      |   |             |              |              |  |  |   |  |

1 2 3 4 5 6 7 8

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FLAT PATTERN



|   |                                   |
|---|-----------------------------------|
| ORIGINAL DATE<br>1/26/09  | REVISED DATE<br>1/26/09           |
| DESIGNED BY<br>P. POLAND  | CHECKED BY<br>P. BRAVO            |
| SPANNING APPROVAL<br>P. BRAVO   |                                   |
| CONTRACT NO.  |                                   |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE .010<br>3 PLACES DECIMALS ARE<br>TOLERANCES ARE .005<br>ANGLES ± 10° |                                   |
| MR. B<br>02/26  | CAGE CODE<br>Dwg. No.<br>647.0100 |
| SCALE: NONE   |                                   |
| 1 SHEET 2 OF 6  |                                   |

APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760)724-5300

SHEETMETAL

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

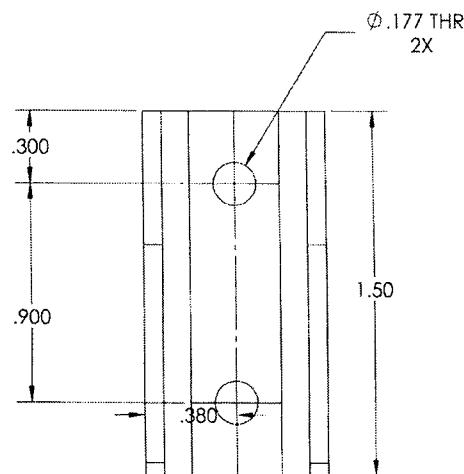
|                   |                   |                          |               |                            |           |                          |                     |                          |             |                          |
|-------------------|-------------------|--------------------------|---------------|----------------------------|-----------|--------------------------|---------------------|--------------------------|-------------|--------------------------|
| Work Order: _____ | DISPOSITION       |                          |               | AGAINST DEPARTMENT/PROCESS |           |                          |                     |                          |             |                          |
| Part No. _____    | Rework            | <input type="checkbox"/> | Skid-tube     | <input type="checkbox"/>   | Crosstube | <input type="checkbox"/> | Water Jet           | <input type="checkbox"/> | Engineering | <input type="checkbox"/> |
| NCR No. _____     | Scrap             | <input type="checkbox"/> | Machining     | <input type="checkbox"/>   | Small Fab | <input type="checkbox"/> | Prod. Eng. Coor.    | <input type="checkbox"/> | Quality     | <input type="checkbox"/> |
|                   | Use-as-is         | <input type="checkbox"/> | Thermoforming | <input type="checkbox"/>   | Finishing | <input type="checkbox"/> | Rec/Store/Packaging | <input type="checkbox"/> | Other       | <input type="checkbox"/> |
|                   | Work Order Update | <input type="checkbox"/> | Large Fab     | <input type="checkbox"/>   | Composite | <input type="checkbox"/> | Supplier            | <input type="checkbox"/> |             |                          |

| Root Cause    | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Setup         |      |      |     |   |                   |                    |             |              |              |
| Other         |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

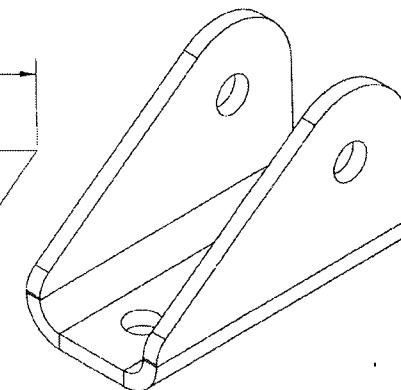
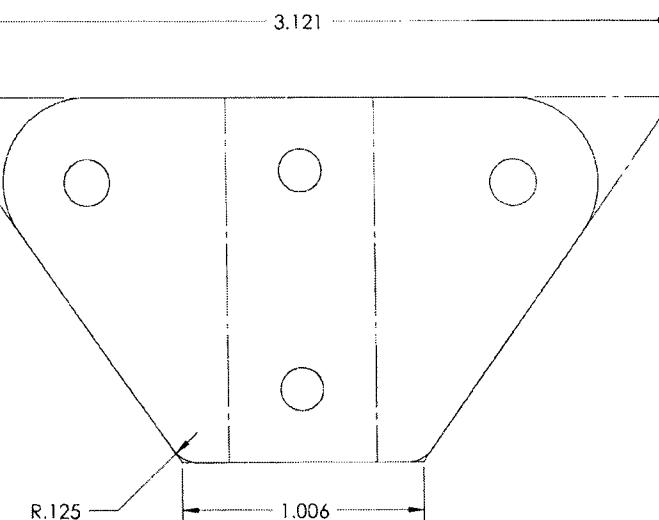
## FAULT CATEGORY

|                              |                          |                |                          |                                 |                          |                      |                          |                    |
|------------------------------|--------------------------|----------------|--------------------------|---------------------------------|--------------------------|----------------------|--------------------------|--------------------|
| Landing Gear                 |                          | General        |                          |                                 |                          |                      |                          |                    |
| Bending                      | <input type="checkbox"/> | Bend           | <input type="checkbox"/> | Grain                           | <input type="checkbox"/> | Ovalized             | <input type="checkbox"/> | Pressure/Forced    |
| Centre Not Concentric to O/S | <input type="checkbox"/> | BOM/Route      | <input type="checkbox"/> | Hardware                        | <input type="checkbox"/> | Over/Under tolerance | <input type="checkbox"/> | Temperature/Cure   |
| Cracks                       | <input type="checkbox"/> | Broken/Damaged | <input type="checkbox"/> | Inspection Incomplete           | <input type="checkbox"/> | Part Incorrect       | <input type="checkbox"/> | Weld               |
| Crushed/Crimped              | <input type="checkbox"/> | Burrs          | <input type="checkbox"/> | Instructions Incomplete/Unclear | <input type="checkbox"/> | Part Lost/Missing    | <input type="checkbox"/> | Wrong Stock Pulled |
| Cuffs                        | <input type="checkbox"/> | Contamination  | <input type="checkbox"/> | Maintenance                     | <input type="checkbox"/> | Part Moved           | <input type="checkbox"/> |                    |
| Heat Treat                   | <input type="checkbox"/> | Countersink    | <input type="checkbox"/> | Mislabeled                      | <input type="checkbox"/> | Positioned Wrong     | <input type="checkbox"/> |                    |
| Inspection Strip in Tube     | <input type="checkbox"/> | Cut Too Short  | <input type="checkbox"/> | Misread                         | <input type="checkbox"/> | Power Loss/Surge     | <input type="checkbox"/> |                    |
| Ripples in Bend              | <input type="checkbox"/> | Drill Holes    | <input type="checkbox"/> | Offset                          | <input type="checkbox"/> | Other                | <input type="checkbox"/> |                    |
| Torque Waves in Extrusion    | <input type="checkbox"/> | Drawing        | <input type="checkbox"/> | Out of Calibration              | <input type="checkbox"/> |                      | <input type="checkbox"/> |                    |
| Turning Sequence             | <input type="checkbox"/> | Finish         | <input type="checkbox"/> | Out of Sequence                 | <input type="checkbox"/> |                      | <input type="checkbox"/> |                    |
| Wave/Twist in Tube           | <input type="checkbox"/> | Folio          | <input type="checkbox"/> | Outside Dimensions              | <input type="checkbox"/> |                      | <input type="checkbox"/> |                    |

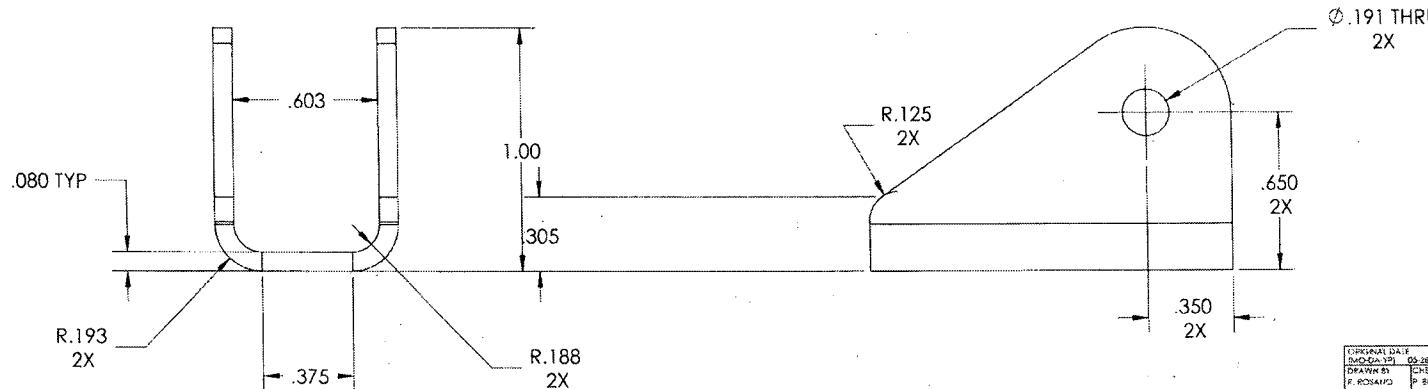
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FLAT PATTERN



647.0112



89697

|  |             |   |         |      |
|--|-------------|---|---------|------|
| SPRINGFIELD, VA 20529  | 05-28-09    | APICAL INDUSTRIES                       |         |      |
| DRAWN BY   | CHECER      | 2008 TEMPLE HEIGHTS DR.                 |         |      |
| F. ROSARIO   | P. BRAVO    | OCEANSIDE, CA. 92056-3512 (760)724-5300 |         |      |
| DRAWING APPROVAL   |             |   |         |      |
| JULY 1, 2009   |             |   |         |      |
| 05-28-09   |             |   |         |      |
| CONTRACTING  |             | SHEETMETAL                              |         |      |
| <p>DESIGN CHARTERS ARE INCLUDED<br/>DRAWINGS ARE NOT DRAWN TO SCALE<br/>TOLERANCES ARE<br/>NOT INDICATED<br/>3 PLACE DECIMALS<br/>ANGLES 1' - 3'</p> |             |   |         |      |
| REV. A   | SCALE: NONE | 647,0100                                | 03 OF 6 | REV. |
| 760-724-5300   | 07M760      | Dwg. No.                                | Sheet   | Code |

NCR: Yes / No

DQA: Date:

## WORK ORDER NON-CONFORMANCE / UPDATE

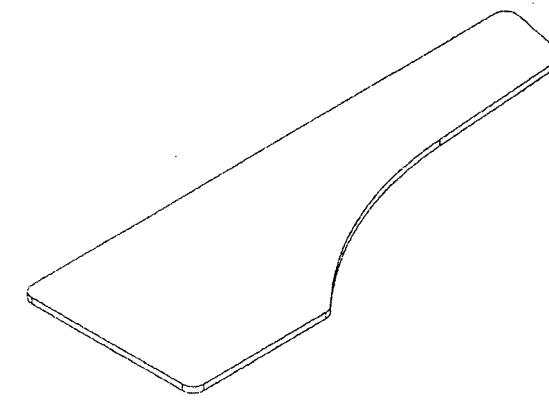
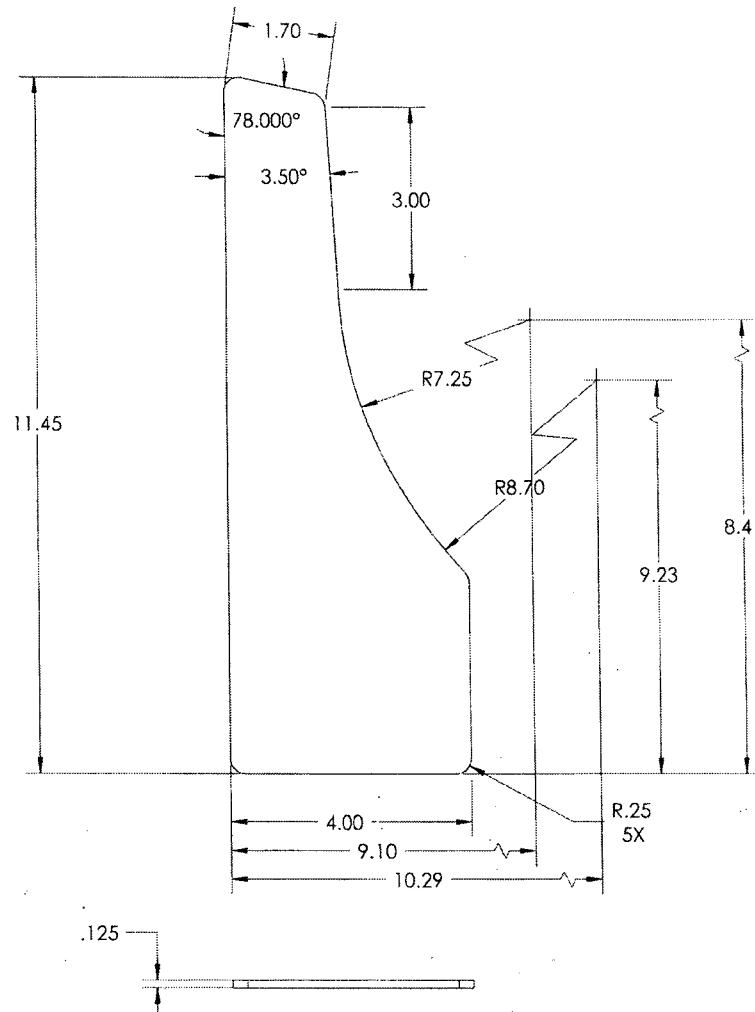
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_ \*

|   |  |      |      |   |  |  |  |   |             |  |              |
|---|--|------|------|---|--|--|--|---|-------------|--|--------------|
| Work Order: _____<br>Part No. _____<br>NCR No. _____  |  |      |      | DISPOSITION   |  | AGAINST DEPARTMENT/PROCESS   |  |   |             |  |              |
|   |  |      |      | Rework<br>Scrap<br>Use-as-is<br>Work Order Update   | Skid-tube<br>Machining<br>Thermoforming<br>Large Fab | Crosstube<br>Small Fab<br>Finishing<br>Composite   | Water Jet<br>Prod. Eng. Coor.<br>Rec/Store/Packaging<br>Supplier | Engineering<br>Quality<br>Other   |             |  |              |
| Root Cause  |  | Date | Step | Qty   | Description of work order update or Non-conformance  |  | Initial Chief Eng  | Action Description  | Sign & Date | Verification   | QC Inspector |
| Doc/Data  |  |      |      |   |  |  |  |   |             |  |              |
| Equip/Tooling   |  |      |      |   |  |  |  |   |             |  |              |
| Operator  |  |      |      |   |  |  |  |   |             |  |              |
| Material  |  |      |      |   |  |  |  |   |             |  |              |
| Setup   |  |      |      |   |  |  |  |   |             |  |              |
| Other   |  |      |      |   |  |  |  |   |             |  |              |
| Process   |  |      |      |   |  |  |  |   |             |  |              |
| Supplier  |  |      |      |   |  |  |  |   |             |  |              |
| Training  |  |      |      |   |  |  |  |   |             |  |              |
| Unapproved  |  |      |      |   |  |  |  |   |             |  |              |
| <b>FAULT CATEGORY</b>   |  |      |      |   |  |  |  |   |             |  |              |
| Landing Gear<br>Bending<br>Centre Not Concentric to O/S<br>Cracks<br>Crushed/Crimped<br>Cuffs<br>Heat Treat<br>Inspection Strip in Tube<br>Ripples in Bend<br>Torque Waves in Extrusion<br>Turning Sequence<br>Wave/Twist in Tube |  |      |      | General<br>Bend<br>BOM/Route<br>Broken/Damaged<br>Burrs<br>Contamination<br>Countersink<br>Cut Too Short<br>Drill Holes<br>Drawing<br>Finish<br>Folio |  | Grain<br>Hardware<br>Inspection Incomplete<br>Instructions Incomplete/Unclear<br>Maintenance<br>Mislabeled<br>Misread<br>Offset<br>Out of Calibration<br>Out of Sequence<br>Outside Dimensions |  | Ovalized<br>Over/Under tolerance<br>Part Incorrect<br>Part Lost/Missing<br>Part Moved<br>Positioned Wrong<br>Power Loss/Surge |             | Pressure/Forced<br>Temperature/Cure<br>Weld<br>Wrong Stock Pulled<br><br>Other |              |

1 2 3 4 5 6 7 8

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| REVISION |  | DESCRIPTION | DATE | APPROVED |
|----------|--|-------------|------|----------|
|          |  |             |      |          |



89697

|  |            |             |            |   |   |
|--|------------|-------------|------------|---|---|
| ORIGINAL DATE  | 07/16/2016 | DRAWING NO. | 647.0101   | APICAL INDUSTRIES                       |   |
| DRAWN BY   | P. BRAVO   | CHECKED     | P. BRAVO   | 2608 TEMPLE HEIGHTS DR.                 |   |
| DESIGNED BY  | P. BRAVO   | APPROVED    | P. BRAVO   | OCEANSIDE, CA. 92056-3512 (760)724-5300 |   |
| DRAWING APPROVAL   |            |             |            |   |   |
| M. BRAVO<br>P. BRAVO<br>S. BRAVO<br>CONTRACTING  |            |             |            |   |   |
| UNLESS OTHERWISE SPECIFIED<br>TOLERANCES ARE IN INCHES<br>TOLERANCES ARE<br>STRAIGHTNESS ± 0.05<br>FLATNESS ± 0.05<br>GAPS ± 0.5 |            |             |            |   |   |
| SCALE  | 1:1        | DATE        | 07/16/2016 | REV.                                    | A |
| SHEET  | 4          | OF          | 6          |   |   |

SHEETMETAL

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date: . . . . .

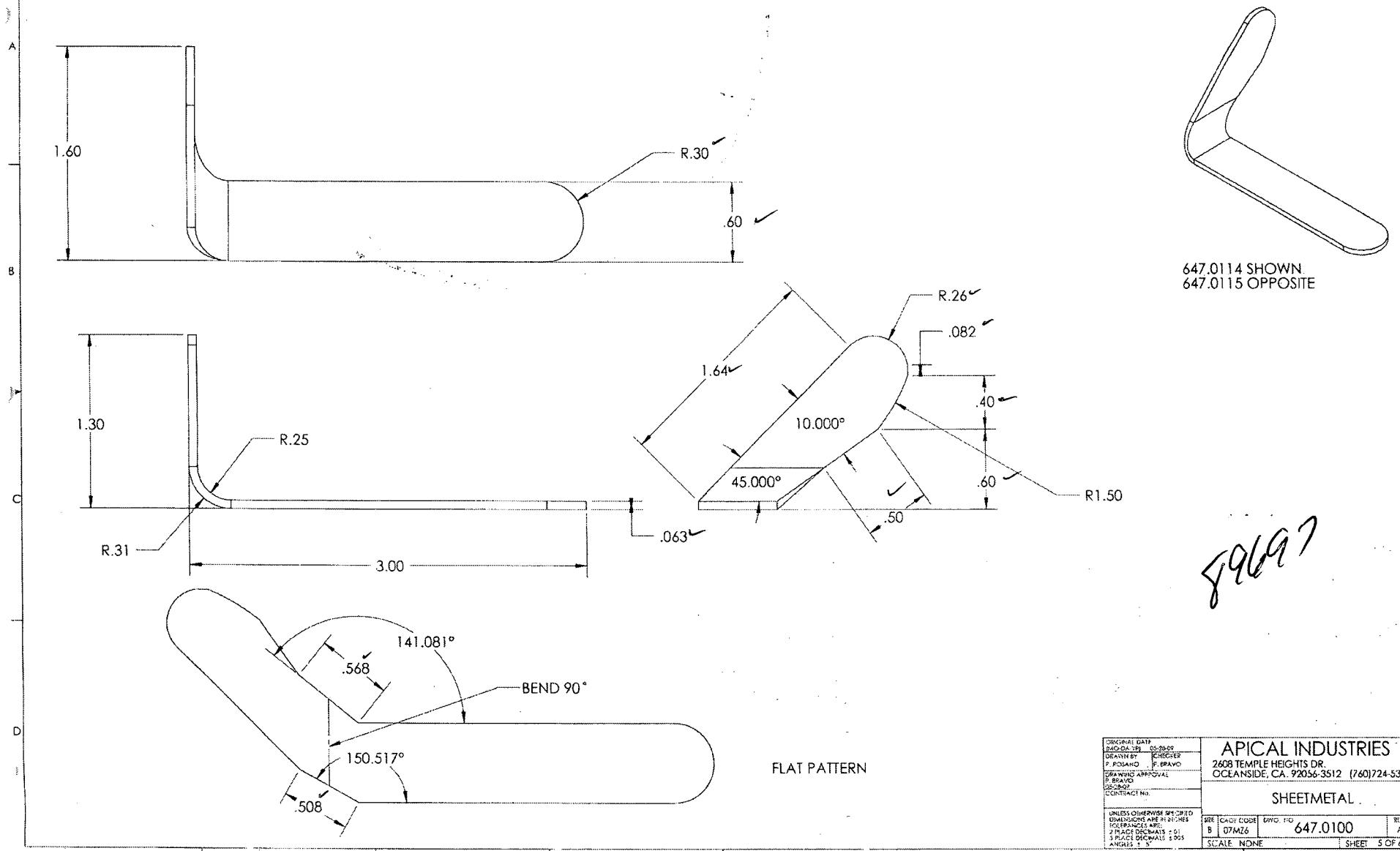
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____   |      |      | DISPOSITION                                       |  |  | AGAINST DEPARTMENT/PROCESS                                       |                                 |              |              |  |  |   |  |
|---|------|------|---|--|--|--|---------------------------------|--------------|--------------|--|--|---|--|
|   |      |      | Rework<br>Scrap<br>Use-as-is<br>Work Order Update | Skid-tube<br>Machining<br>Thermoforming<br>Large Fab   | Crosstube<br>Small Fab<br>Finishing<br>Composite | Water Jet<br>Prod. Eng. Coor.<br>Rec/Store/Packaging<br>Supplier | Engineering<br>Quality<br>Other |              |              |  |  |   |  |
| Part No. _____  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| NCR No. _____   |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Root Cause  | Date | Step | Qty   | Description of work order update or Non-conformance  | Initial Chief Eng                                | Action Description   | Sign & Date                     | Verification | QC Inspector |  |  |   |  |
| Doc/Data  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Equip/Tooling   |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Operator  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Material  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Setup   |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Other   |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Process   |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Supplier  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Training  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Unapproved  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| FAULT CATEGORY  |      |      |   |  |  |  |                                 |              |              |  |  |   |  |
| Landing Gear  |      |      |   | General  |  |  |                                 |              |              |  |  |   |  |
| <input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      |   | <input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |  |                                 |              |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |  |
|   |      |      |   |  |  |  |                                 |              |              |  |  | <input type="checkbox"/> Other  |  |

1 1 2 3 1 4 1 5 1 6 1 7 1 8

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| REV. | DESCRIPTION | DATE | APPROVED |  |
|------|-------------|------|----------|--|
|      |             |      |          |  |
|      |             |      |          |  |



NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

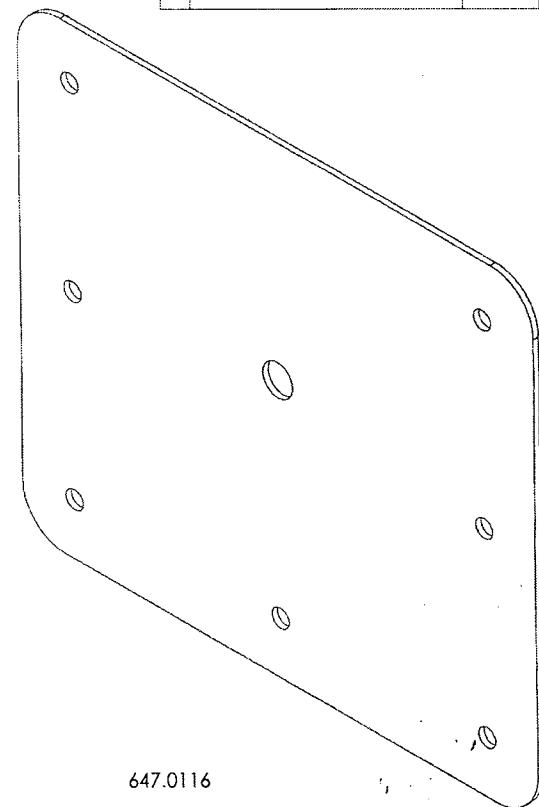
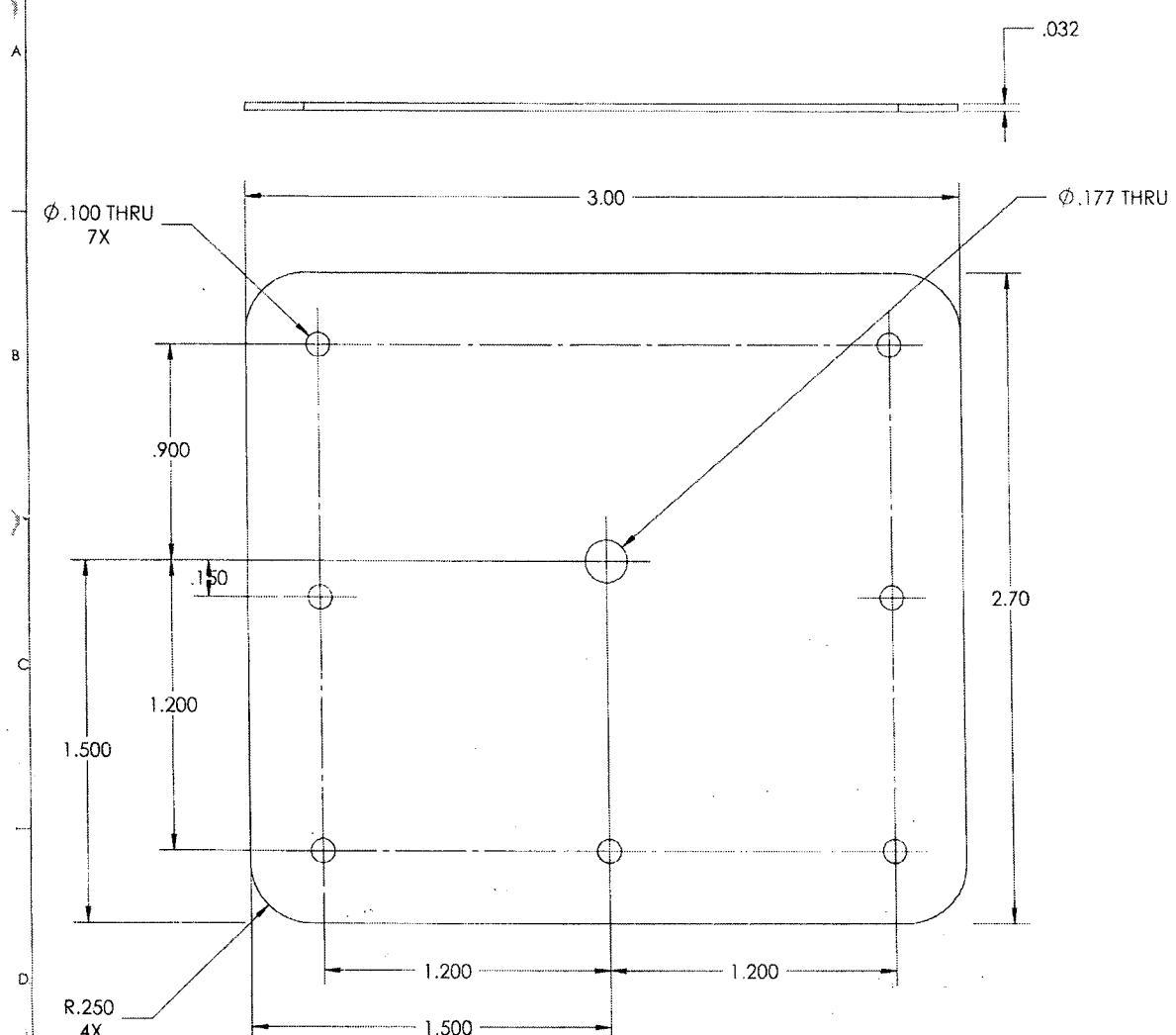
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____  |      | DISPOSITION                                |  | AGAINST DEPARTMENT/PROCESS   |  |                                      |             |  |              |   |
|--|------|--|--|--|--|--------------------------------------|-------------|--|--------------|---|
| Part No. _____   |      | Rework <input type="checkbox"/>            | Skid-tube <input type="checkbox"/>     | Crosstube <input type="checkbox"/>   | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |             |  |              |   |
| NCR No. _____  |      | Scrap <input type="checkbox"/>             | Machining <input type="checkbox"/>     | Small Fab <input type="checkbox"/>   | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |             |  |              |   |
|  |      | Use-as-is <input type="checkbox"/>         | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/>   | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |             |  |              |   |
|  |      | Work Order Update <input type="checkbox"/> | Large Fab <input type="checkbox"/>     | Composite <input type="checkbox"/>   | Supplier <input type="checkbox"/>            |                                      |             |  |              |   |
| Root Cause   | Date | Step                                       | Qty                                    | Description of work order update or Non-conformance  | Initial Chief Eng                            | Action Description                   | Sign & Date | Verification   | QC Inspector |   |
| Doc/Data   |      |  |  |  |  |                                      |             |  |              |   |
| Equip/Tooling  |      |  |  |  |  |                                      |             |  |              |   |
| Operator   |      |  |  |  |  |                                      |             |  |              |   |
| Material   |      |  |  |  |  |                                      |             |  |              |   |
| Setup  |      |  |  |  |  |                                      |             |  |              |   |
| Other  |      |  |  |  |  |                                      |             |  |              |   |
| Process  |      |  |  |  |  |                                      |             |  |              |   |
| Supplier   |      |  |  |  |  |                                      |             |  |              |   |
| Training   |      |  |  |  |  |                                      |             |  |              |   |
| Unapproved   |      |  |  |  |  |                                      |             |  |              |   |
| FAULT CATEGORY   |      |  |  |  |  |                                      |             |  |              |   |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |  |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |                                      |             | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Other |              | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |

1 2 3 4 5 6 7 8

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| REV. | DESCRIPTION | DATE | APPROVED |
|------|-------------|------|----------|
|      |             |      |          |
|      |             |      |          |
|      |             |      |          |
|      |             |      |          |
|      |             |      |          |



|   |   |
|---|---|
| DRAWN BY  | APICAL INDUSTRIES                       |
| DESIGNED BY   | 2608 TEMPLE HEIGHTS DR.                 |
| CHECKED BY  | OCEANSIDE, CA. 92056-3512 (760)724-5300 |
| APPROVED BY   |   |
| PRINTED BY  |   |
| CONTRACTING   |   |
| SHEETMETAL  |   |
| UNLESS OTHERWISE SPECIFIED<br>ALL DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE<br>+0.005, -0.005<br>MAX. DEF. 0.005<br>MIN. DEF. -0.005<br>ANGLES 1° 5° |   |
| REV. B<br>07M26   | DMG NO. 647.0100                        |
| SCALE: NONE   | PEV. A                                  |
| 1 SHEET 6 OF 6  |   |

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____   |      | DISPOSITION                                |  | AGAINST DEPARTMENT/PROCESS   |  |                                      |             |  |              |   |
|---|------|--|--|--|--|--------------------------------------|-------------|--|--------------|---|
| Part No. _____  |      | Rework <input type="checkbox"/>            | Skid-tube <input type="checkbox"/>     | Crosstube <input type="checkbox"/>   | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |             |  |              |   |
| NCR No. _____   |      | Scrap <input type="checkbox"/>             | Machining <input type="checkbox"/>     | Small Fab <input type="checkbox"/>   | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |             |  |              |   |
|   |      | Use-as-is <input type="checkbox"/>         | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/>   | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |             |  |              |   |
|   |      | Work Order Update <input type="checkbox"/> | Large Fab <input type="checkbox"/>     | Composite <input type="checkbox"/>   | Supplier <input type="checkbox"/>            |                                      |             |  |              |   |
| Root Cause  | Date | Step                                       | Qty                                    | Description of work order update or Non-conformance  | Initial Chief Eng                            | Action Description                   | Sign & Date | Verification   | QC Inspector |   |
| Doc/Data  |      |  |  |  |  |                                      |             |  |              |   |
| Equip/Tooling   |      |  |  |  |  |                                      |             |  |              |   |
| Operator  |      |  |  |  |  |                                      |             |  |              |   |
| Material  |      |  |  |  |  |                                      |             |  |              |   |
| Setup   |      |  |  |  |  |                                      |             |  |              |   |
| Other   |      |  |  |  |  |                                      |             |  |              |   |
| Process   |      |  |  |  |  |                                      |             |  |              |   |
| Supplier  |      |  |  |  |  |                                      |             |  |              |   |
| Training  |      |  |  |  |  |                                      |             |  |              |   |
| Unapproved  |      |  |  |  |  |                                      |             |  |              |   |
| FAULT CATEGORY  |      |  |  |  |  |                                      |             |  |              |   |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |  |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |                                      |             | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Other |              | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled |